



CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005



Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/CEMENT/2015-16



Date: 08.04.2015

TEST REPORT ON CEMENT

* CUSTOMER	: Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* AGENCY	: Mr. B.T. Ravikumar, No.180, 3 rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
* NAME OF THE WORK	: Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank 1 st cross Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP, Bangalore.
* REFERENCE	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015
SAMPLE ID	: Cement
SAMPLE RECEIVED ON	: 06.04.2015
PERIOD OF TESTING	: 06.04.2015 to 08.04.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	480 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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 ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/SAND-Gradation/2015-16

: 08.04.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

- * **Customer** : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
- * **Agency** : Mr. B.T. Ravikumar,
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
- * **Name of Work** : Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank
1st cross Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP,
Bangalore.
- Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015
- Technical Reference** : IS : 2386 Part 1 - 1963 RA-2007
- Sample ID** : Fine Aggregates
- Sample Received on** : 06.04.2015
- Date of Testing** : 08.04.2015



Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.70	90-100	90-100	90-100	95-100
2.36	75.20	60-95	75-100	85-100	95-100
1.18	57.20	30-70	55-90	75-100	90-100
600 Micron	28.70	15-34	35-59	60-79	80-100
300 Micron	13.70	5-20	8-30	12-40	15-50
150 Micron	4.20	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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ಟಿ.ದಾಸರಹಳ್ಳಿ, ಉಪ-ವಿಭಾಗ

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/AGG/GR/2015-16

: 08.04.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* **Customer** : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

* **Agency** : Mr. B.T. Ravikumar,
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.

* **Name of Work** : Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank 1st cross Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 06.04.2015

Date of Testing : 08.04.2015



Total Wt. of Aggregates in gms= 10000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.45	95-100	85-100
20	43.35	30-70	0-20
10	21.00	10-35	0-5
4.75	2.70	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.14/BTRK/STEEL/2015-16

13.04.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.**

Agency : **Mr. B.T. Ravikumar,**
No.180, 3rd Main, H.V.R. Layout, Magadi Road,
Bangalore – 560079.

Name of the work : Improvements to road, drain & footpath near
Shyamrao Vittal Co.op. Bank 1st cross Bhuvaneshwari
Nagara in Bagalagunte Ward No.14, BBMP,
Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated:
06.04.2015

Date of Test : 13.04.2015

Technical Reference : IS: 1786-2008



Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	10	0.62	513	556	13.15	O.K	O.K

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Job No.: CTCE/BBMP/W.No.14/BTRK/STEEL/2015-16

13.04.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.**

Agency : **Mr. B.T. Ravikumar,**
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Name of the work : Improvements to road, drain & footpath near
Shyamrao Vittal Co.op. Bank 1st cross Bhuvaneshwari
Nagara in Bagalagunte Ward No.14, BBMP,
Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated:
06.04.2015

Date of Test : 13.04.2015

Technical Reference : IS: 1786-2008



Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	12	0.89	515	558	13.35	O.K	O.K

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/CC Solid Block/2015-16

: 16.04.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer : **Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.**

* Agency : **Mr. B.T. Ravikumar,**
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.

* Name of the Work : Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank 1st cross Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015

Sample Received on : 11.04.2015

Date of Testing : 16.04.2015

Size of Blocks : 400mm x 200mm x 200mm

Cross Sectional Area : 80000 mm²

Technical Reference : IS: 2185 (Part 1) - 2005

No. of Blocks Tested : 08



Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm ²)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	36.25	260.5	3.26	Minimum required Compressive Strength of Individual Units 3.20 N/mm ²
2	Block 2	35.25	261.5	3.27	
3	Block 3	34.56	262.3	3.28	
4	Block 4	36.20	263.0	3.29	
5	Block 5	35.12	263.5	3.29	
6	Block 6	36.23	264.1	3.30	
7	Block 7	35.62	262.5	3.28	
8	Block 8	34.95	263.1	3.29	



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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/CUBE/2015-16

21.05.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

- * Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
- * Agency : Mr. B.T. Ravikumar,
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
- * Name of the work : Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank 1st cross Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP, Bangalore.
- * Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015
- * Sample ID : Cement Concrete
- Size of cubes : 150mmx150mmx150mm
- Cross Sectional Area : 22500 mm²
- Technical Reference : IS: 516-1959 (Reaffirmed 2008)
- * Grade of Concrete : M₁₅



Compressive Strength as on : 28th day

Sample Received on : 23.04.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	23.04.2015	21.05.2015	8.199	356.3	15.84
2	23.04.2015	21.05.2015	8.258	365.3	16.24
3	23.04.2015	21.05.2015	8.365	378.2	16.81

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/CUBE/2015-16

26.05.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

- * Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
- * Agency : Mr. B.T. Ravikumar,
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
- * Name of the work : Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank 1st cross Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP, Bangalore.
- * Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015
- * Sample ID : Cement Concrete
- Size of cubes : 150mmx150mmx150mm
- Cross Sectional Area : 22500 mm²
- Technical Reference : IS: 516-1959 (Reaffirmed 2008)
- * Grade of Concrete : M₁₅
- Compressive Strength as on : 28th day
- Sample Received on : 28.04.2015



Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	28.04.2015	26.05.2015	8.470	362.5	16.11
2	28.04.2015	26.05.2015	8.235	345.5	15.36
3	28.04.2015	26.05.2015	8.302	352.8	15.68

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-4/808j/Pre Cast Slab/2015-16

07.05.2015

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

* Name of Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

* Name of Agency : Mr. B.T. Ravikumar,
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.

* Name of work : Improvements to road, drain & footpath near Shyamrao Vittal Co.op. Bank 1st cross
Bhuvaneshwari Nagara in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 06.04.2015

Technical Reference : IS:516-1959 (Reaffirmed 2008), SP-24:1983.

Sample ID : Pre Cast Slab (100mm thick)

Sample Received on : 02.05.2015

Date of Testing : 07.05.2015



Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m ³)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm ²)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm ²)	Equivalent Cube Compressive Strength (N/mm ²)
1	50.00	77.00	0.379	2506.79	1.54	0.955	32.00	16.30	17.60	16.81	21.01
2	50.00	78.00	0.385	2513.83	1.56	0.960	32.75	16.68	18.01	17.29	21.62
3	50.00	79.00	0.391	2520.69	1.58	0.965	33.10	16.86	18.21	17.57	21.96

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